

ASEE Statement on Engineering Ethics Education

As the result of the accelerating pace of scientific and technological change which is rapidly transforming society and the economy, issues of ethical choice have taken on an increasing importance for all professions, and especially for engineering. In recognition of this challenge, ABET's Engineering Criteria 2000 include "an understanding of professional and ethical responsibility" among the general criteria for basic level programs in engineering. ASEE agrees that ethics education must be an essential element in the education of all engineers.

ASEE believes that, because engineering has a large and growing impact on society, engineers must be equipped by their education to fulfill their ethical obligations to the public at large, to their profession, and to their clients and employers. The ethical problems that may be confronted by engineers include such issues as conflicts of interest, threats to public health and safety or to the environment, trade secrets and proprietary information, gifts from contractors and others, honesty in research and testing, and yet other problems which will inevitably result from the application of new and revolutionary technologies.

To educate students to cope with ethical problems, the first task of the teacher is to make students aware of ethical problems and help them learn to recognize them. A second task is to help students understand that their projects affect people for good or ill, and that, as "moral agents" they need to understand and anticipate these effects. A third task is to help students see that, as moral agents, they are responsible for helping to develop solutions to the ethical problems they encounter.

ASEE believes that ethics education in engineering should endeavor to equip students with the skills to confront ethical problems and exercise their ethical responsibilities as engineers. While ethical issues can be raised in a lecture format, students also need practice solving ethical problems first-hand. Educators can employ a variety of problem-solving activities to give students experience using decision-making tools to handle ethical problems. These activities can involve role-playing, computer simulations, group projects, and engineering cases which involve both unusual and everyday situations. To provide this experience, engineering schools have found two basic ways to fit ethics instruction into their curriculum: by establishing freestanding courses in ethics, and by integrating ethics across the curriculum.

Whichever means is chosen to impart the ethics experience in the engineering curriculum, ASEE strongly shares the view that, to survive in the work world of the 21 century and to carry out responsibly their roles as agents of technological change, new engineering graduates need substantial training in recognizing and solving ethical problems.

The American Society for Engineering Education is a nonprofit association of more than 11,000 members representing colleges, corporations, and other organizations dedicated to promoting excellence in engineering education and engineering technology education. ASEE, which celebrated its centennial in 1993, plays a key role in developing and promoting policies that will enable engineering education and its allied branches of science and technology to meet the new challenges of global competition and technological change.

Approved: ASEE Board of Directors, January 31, 1999